

Inequality and the Right to Learn: Access to Qualified Teachers in California's Public Schools

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As new standards for students are taking effect, large disparities continue to exist in the educational opportunities available to rich and poor students in most states. These disparities are especially pronounced in California, where thousands of students attend school in dilapidated buildings, without textbooks, materials, or qualified teachers. This article focuses on inequalities in children's access to qualified teachers, documenting the disproportionate assignment of untrained and uncredentialed teachers to students in high-minority, low-income schools and the effects that large concentrations of such teachers have on students' opportunities to learn. Given the importance of teacher expertise to student achievement, and the existence of new standards to which students are held accountable, these inequalities threaten students' basic rights to an education. The article outlines the legal rationale for insisting on access to qualified teachers for all students, analyzes the reasons for the current shortfalls in California, and proposes a set of remedies based on research and policy outcomes elsewhere.

Across the United States, new state standards for student learning reflect greater demands for higher order thinking and performance. Whereas in the past, schools varied the curriculum and learning standards for different learners, today's students are being asked to master the same curriculum standards and pass the same tests for promotion and graduation, regardless of their different learning needs, starting points, and prior experiences. Yet as new standards for students are taking effect, large disparities continue to exist in the educational opportunities available to rich and poor students in most states. Nowhere are these disparities more pronounced than in California, where thousands of students attend school in dilapidated buildings, without textbooks, materials, or qualified teachers—the most basic elements of schooling.

The plaintiffs' brief in the recently filed *Williams v. State of California* lawsuit includes this description of a school serving low-income students of color in San Francisco:

At Luther Burbank, students cannot take textbooks home for homework in any core subject. . . . Some math, science, and other core classes do not have even enough textbooks for all the students in a single class to use during the school day, so some students must share the same one book during class time. . . . For homework, students must take home photocopied pages, with no accompanying text for guidance or reference, when and if their teachers have enough paper to use to make homework copies. . . . The social studies textbook Luther Burbank students use is so old that it does not reflect the breakup of the former Soviet Union. Luther Burbank is infested with vermin and roaches and students routinely see mice in their classrooms. One dead rodent has remained, decomposing, in a corner in the gymnasium since the beginning of the school year. The school library is rarely open, has no librarian, and has not recently been updated. Luther Burbank classrooms do not have computers. Computer instruction and research skills are not, therefore, part of Luther Burbank students' regular instruction in their core courses. . . . Two of the three bathrooms at Luther Burbank are locked all day, every day. The third bathroom is locked during lunch and other periods during the school day, so there are times during school when no bathroom at all is available for students to use. Students have urinated or defecated on themselves at school because they could not get into an unlocked bathroom. . . . When the bathrooms are not locked, they often lack toilet paper, soap, and paper towels, and the toilets frequently are clogged and overflowing. . . . Ceiling tiles are missing and cracked in the school gym, and school children are afraid to play basketball and other games in the gym because they worry that more ceiling tiles will fall on them during their games. . . . Eleven of the 35 teachers at Luther Burbank have not yet obtained regular, nonemergency credentials, and 17 of the 35 teachers only began teaching at Luther Burbank this school year. (*Williams v. State of California*, Superior Court of the State of CA for the County of San Francisco, 2001, Complaint, 58–66)

These desperate conditions, shared by other schools, raise the question of what accountability a state should have to its students for the provision of an education that will prepare them to meet the standards it has set and that a 21st century economy demands. In California, a particularly troubling aspect of these inadequacies is the fact that more than 40,000 teachers are working without full preparation or credentialing, almost exclusively in high-minority and low-income schools (Shields et al., 2001). Given the central importance of knowledgeable and skillful teachers to student learning, lack of access to qualified teachers constitutes a major threat to equal

educational opportunity. This article examines the issues associated with the distribution of qualified teachers in light of state standards and the policy remedies available to ensure that all students gain access to well-qualified teachers.

OPPORTUNITIES TO LEARN IN CALIFORNIA

Following the passage of Proposition 13 in 1979, California's expenditures on public education declined markedly. By 1999–2000, California ranked first in the nation in the number of pupils it serves but 38th in expenditures per student, 48th in K–12 expenditures as a share of personal income, and 50th in the ratio of students per teacher, despite the influence of class size reductions during the late 1990s (Ed Source, 2001, p. 1). By the late 1990s, California employed a greater number of underqualified teachers¹ than any other state in the country, and California ranked in the bottom decile among states on class sizes, staff/pupil ratios, libraries, and most other school resources.

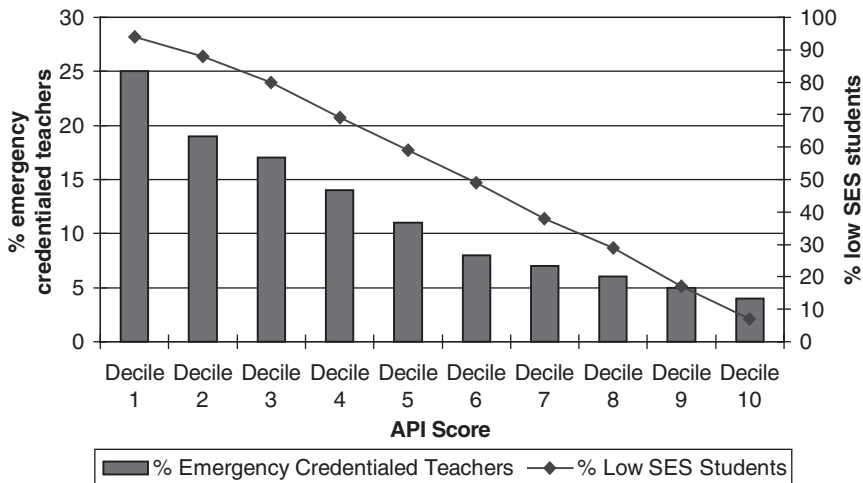
Growing inequalities in funding are also a problem. In 1998, the California Postsecondary Education Commission (CPEC) noted that:

The gap in expenditures for education between the high-spending and low-spending school districts in our state . . . has risen to \$4,480. . . . Perhaps the most disturbing part of this statewide picture is that many of the disparities noted above are consistently and pervasively related to the socioeconomic and racial-ethnic composition of the student bodies in school as well as the geographical location of schools. That is, schools in our low socioeconomic communities as well as our neighborhoods with a predominance of Black and Latino families often have dilapidated facilities, few or inadequate science laboratories, teachers in secondary schools providing instruction in classes for which they have no credential, curriculum that is unimaginative and boring, and teachers who change schools yearly and lack the professional development to complement their teaching with new instructional strategies and materials. (CPEC, 1998, p. 29)

Once among the highest-achieving states in the nation, California now ranks nationally among the bottom three states in elementary reading and mathematics achievement on the National Assessment of Educational Progress. Analyses by the RAND Corporation and the Public Policy Institute of California (PPIC) confirm that California students perform considerably worse than those in other states on standardized tests even after adjusting for language backgrounds, ethnicity, and parental education

(Carroll, Reichardt, & Guarino, 2000; Sonstelie, Brunner, & Ardon, 2000). The RAND Corporation report notes that the quality of teachers available to students is a critical element in the provision of educational opportunity. The growing number of underqualified teachers has contributed to growing inequality in opportunity to learn. Students in high-minority and low-income schools are several times as likely to have underqualified teachers as those in more affluent schools. Students in the lowest achievement decile on the state's Academic Performance Index (API) are more than six times as likely to have underqualified teachers as students in the highest decile. The presence of underqualified teachers is strongly related both to student socioeconomic status and to student achievement. (See Figure 1.) According to an analysis by PACE (2000), "Over the past six years, this relationship (between socio-economic measures and achievement scores) has strengthened, not diminished."

The unequal allocation of teachers has worsened each year since the early 1990s. While the proportion of California schools staffed completely with fully qualified teachers has increased in response to recent policy initiatives (from 24% in 1997–1998 to 28% in 2000–2001), the share of schools in which more than 20% of teachers are underqualified has also increased, from 20% in 1997–1998 to 24% in 2000–2001 (Shields et al., 2001, p. 20).



Source: Data reported in California Teachers Association, *Low-performing schools = High priority schools*. Sacramento, CA: CTA, 2000, pp. 19, 37.

Figure 1. The Relationship between California Elementary School API Scores, Student Socioeconomic Status, and Teacher Qualifications, 2000

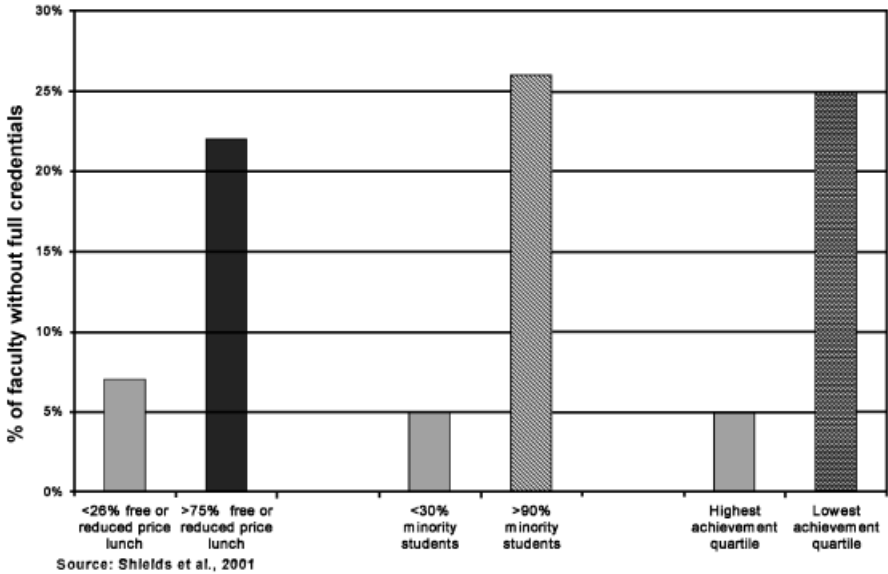


Figure 2. Distribution of Underqualified Teachers

The schools with these large proportions of underprepared teachers—about 1,900 schools enrolling more than 1.7 million children—serve mostly children of color, who frequently experience a parade of short-term, under-prepared instructors throughout their school careers. (See Figure 2.)

THE IMPORTANCE OF WELL-QUALIFIED TEACHERS

These patterns are especially troubling given the evidence that teachers strongly influence student learning. Recent studies have found that student achievement gains are much more influenced by a student's assigned teacher than other factors like class size and composition (Sanders & Horn, 1994; Sanders & Rivers, 1996; Wright, Horn, & Sanders, 1997; Rivkin, Hanushek, & Kain, 2000). A variety of teacher experiences and attributes appear to contribute to this effect, including teachers' general academic and verbal ability; subject matter knowledge; knowledge about teaching and learning as reflected in teacher education background; teaching experience; and the combined set of qualifications measured by teacher certification, which includes most of the preceding factors (for reviews see Darling-Hammond, 2000b; Wilson, Floden, & Ferini-Mundy, 2001).

Several recent studies in California have pointed to strong relationships between measures of teacher qualifications and student achievement.

Among school resources, teacher certification status (i.e., the proportion of teachers on full vs. emergency credentials) has been the strongest predictor of school-level student achievement in mathematics and reading, followed by teacher experience (Betts, Rueben, & Dannenberg, 2000; Fetler, 1999; Goe, 2002). Teachers' level of general education (e.g., possession of a master's degree) also sometimes show a smaller, significant effect on student achievement (Betts, Rueben, & Dannenberg, 2000).

Educators in California, who are exposed to unprepared teachers to a degree unusual in most other parts of the country, are particularly forceful in their conviction that teacher certification is an important indicator of teaching ability. Friedlaender and Frenkel (2002) observed in their study of 17 hard-to-staff California schools that "school and district officials consider credentialed teachers to be a 'valued commodity' and quickly hired the best qualified credentialed teachers" (p. 8). Principals and teachers interviewed for the Williams lawsuit noted that credentialed teachers "know what to do and require less assistance" (Hines, v. 3, 496:13–25), are better prepared (Carey, v. 1, 228:8–229:2), have had mentored student teaching and methodology classes (Lane, v. 2, 74:20–75:14, Pechthalt, v. 1, 110:11–18), and have fewer problems with classroom management and teaching strategies (Salyer, v. 1, 138:23–139:3, Medina, v. 2, 203:5–18; 208:7–16; 209:9–13; Rodriguez, v. 1, 99:9–23). They compare credentialing "as important to teaching as a driver's license is to driving a car" (Roland, v. 1, 32:17–33:5) and as essential as such training is to the qualifications of a dentist (Pechthalt, v. 1, 135:10–20). As one principal noted regarding the importance of effective preparation,

I think a lot of people think they can be a teacher because they've gone to school, and I don't necessarily think that that is a fact. For a person to come to the educational setting, they need to be armed, if you will, with various strategies that they are going to use in the classroom. . . . So I would like to see future teachers truly have a year of methodology classes and observation and student teaching under a quality master teacher where they can try things. . . . (and) effectively evaluate what [they] are doing. (Lane, v. 2, 74: 20–75:14)

Principals attribute the shortages of such teachers to low salaries, poor working conditions, inadequate district or school recruitment, the after-effects of California's class size reduction initiative, and difficult neighborhoods where living conditions are poor and housing is in short supply. Uncredentialed teachers who were hired because of these conditions often comment on their own lack of preparation. For example, at one school,

Friedlaender and Frenkel (2002) wrote of two interns and one emergency permit teacher they interviewed:

All three teachers asserted that they did not feel adequately prepared to teach in their current teaching assignment. They agreed that they had a difficult time with curriculum development and implementation as well as classroom management. In addition, they expressed feeling challenged by all of their “administrative responsibilities such as standardized testing, assessment, and the planning of field trips.” All three teachers ascribed their inadequacy to the fact that they had not participated in a formal teacher education program before entering the profession. . . . All of the teachers also spoke extensively about the fact that most of their students are English Learners (most of whom speak Spanish). The teachers agreed that they were not adequately trained to teach this population of students. They also seemed to resent the fact that the students and their families are not proficient in English because it creates “double the workload” for them as they planned instruction and carried out the required assessment measures. (RE3, p. 4)

Similarly, the researchers observed of another school:

In one urban middle school, all three teachers interviewed not only lacked credentials but had received only six weeks of teacher training from the Teach for America program. While school administrators provided helpful curricular ideas, these teachers’ lack of teaching experience dramatically limited their effectiveness as educators. (p. 11)

Finally, they observed of the more than 50 teachers they interviewed overall:

Across most schools, teachers of English Language Learners (ELL) felt least prepared. For example, one teacher explained that she was assigned a sheltered class when she first came to the school and thought it was for foster care students from a homeless shelter.” Several reading teachers also had no preparation in reading instruction and were teaching students who were reading well below grade-level. According to both teachers and administrators, teachers’ inexperience accelerates teacher burnout. (p. 11)

Teachers deposed for this case described how teaching alongside uncredentialed teachers is a problem not only for these novices without training but also for prepared teachers who must deal with the spillover effects of untrained teachers’ lower levels of competence:

[One teacher] was considering a career change and came in and taught our special ed. class for a year. During the time she was in that class, she was taking one or two courses out at San Francisco State to get her credential in teaching special ed, but she wasn't technically qualified and there was no one on the site who was able to advise her or train her or support her appropriately. She had a pretty miserable year and she admitted candidly to many of us that she felt under-qualified, sometimes unqualified and absolutely did not know what she was doing in there, so it was hard watching her teach. You could tell she was very stressed and very strained. As a peer, it was hard to watch her and it was hard to watch her kids function in the room with somebody who was not experienced and qualified. (Malabed, v. 2, 308:19–309:17)

[I]t was a topic that was . . . discussed at the lunch table about the fact we had a class that had had so many substitutes and had had an uncredentialed teacher who was not able to handle the situation and ended up not returning and the kids were going to struggle and that the . . . teachers who received them the next year would probably have a difficult time with those students because of what they had been through the prior year. (Salyer, v. 1, 167:21–168:15)

THE PROBLEM OF CONCENTRATIONS OF UNTRAINED TEACHERS

All of these problems are exacerbated when schools have large proportions of teachers without training or experience. Stanford Research Institute (SRI) researchers have used a benchmark of 20% or more uncredentialed teachers to demarcate schools that have “high concentrations” of under-qualified teachers, arguing that such high levels “can create problems throughout the entire school community” (Shields et al., 1999, p. 47). These problems include a lack of mentors; high turnover of the untrained teachers, which creates continual hiring needs and instability; an erosion of professional development for other teachers in the building; and the instructional burden that results for other teachers to make up for the shortcomings of their colleagues.

The schools and districts in this category—which tend to be those with very high proportions of “at-risk,” low-income, and ELL students and poor working conditions (Harris, 2002)—lack the human resources needed to create a productive learning environment, with little instructional expertise on their staff and inadequate numbers of expert teachers to help novices develop their skills.

These heavily impacted schools experience a number of negative consequences in addition to the frequent lack of knowledge and skills on the part of individual teachers who are underprepared. One negative consequence is that students are more likely to encounter a string of underprepared teachers, thus experiencing a cumulative effect that is much more damaging to their learning than one year of poor teaching would create (see, e.g., Sanders & Rivers, 1996, for estimates of the cumulative effects of poor teaching).

A second consequence is that, beyond a certain point, the overall expertise in the school is inadequate to support sound educational decision making or collegial learning. When there are fewer people with training and experience, the “collective knowledge” of a school is weakened. There are few experienced personnel who know good practice, understand the school community, and can diagnose students’ needs and how to meet them. Even if there are some knowledgeable teachers on staff, it is impossible for them to carry the load for the entire faculty. With a smaller pool of veteran teachers who can serve as mentors, there are few resources for novices to learn. The few relatively experienced teachers left in a school are overburdened with leadership responsibilities, thus contributing to their own “burn out” (Shields et al., 2000).

Finally, concentrations of underprepared teachers create a drain on schools’ financial as well as human resources. For example, emergency permit teachers have a high attrition rate: According to California Commission on Teacher Credentialing (CCTC) statistics, just over 40% (35% of elementary and 48% of secondary emergency permit recruits) leave the profession within a year,² and two-thirds never receive a credential. This means that schools must continually pour money into recruitment efforts and professional support for new teachers, without reaping dividends from these investments. A recent study in Texas found that teacher attrition can cost school systems \$8,000 or more for each recruit who leaves in the first few years of teaching (Texas Center for Educational Research, 2001). Instead of using funds for needed school improvements, monies are spent in a manner that produces little long-term payoff. Teachers who benefit from the financial efforts of low-performing schools often end up leaving the profession or moving on to more “desirable” teaching positions (Carroll et al., 2000).

THE LEGAL STANDARD FOR TEACHERS AND TEACHING

The lack of standards for student access to qualified teachers stands in contrast to California’s efforts to establish standards for students. In 1995, California enacted requirements for statewide content and performance

standards for student learning to guide the construction of the tests and the curriculum of local school districts. These standards are the basis for many other state requirements and for holding students and schools accountable. All state-adopted curriculum frameworks, instructional materials, examinations, teacher credentialing standards, and school accountability initiatives are to be aligned to the standards. School districts in California are encouraged to tie grade advancement to achievement on the state's standards-based exams.³ The state has developed a system of rewards for schools that meet targets for average gains on the tests and has also established an intervention program followed by punitive sanctions for those that fail to show annual improvements. By 2006, all California children will be required to pass a high school exit examination in language arts and mathematics to earn a high school diploma.⁴ The tests are constructed to evaluate compliance with the state's content standards. Thus, the standards and tests associated with them matter intensely for children in California schools.

The content standards and curriculum frameworks adopted by the State Board describe the instructional content and activities students are expected to engage in to master the standards, and the criteria for adoption of textbooks include a determination of how well materials are aligned with the frameworks and, by genealogy, the standards. It is not only fair but essential, then, to ask what the standards require regarding students' opportunities to learn and to evaluate whether all students have access to these opportunities.

To have an opportunity to meet the standards, students need access to curricular programs, instructional materials, and equipment and technologies that are outlined in the curriculum frameworks. In addition, the standards indicate that, to be effective, teachers must understand the content they are expected to teach and be able to use a wide range of teaching techniques to convey this content (see Koski & Weis, 2002). For example, the English language arts standards convey the expectation that early grade teachers must have a deep understanding of reading development and a range of sophisticated skills to enable reading, including knowledge of the structure of the English language and how to apply best practices of reading instruction. More specifically, teachers must be able to provide instruction and support in phonemic awareness (through grade one), phonics, word decoding and word-attack skills, spelling, vocabulary, reading comprehension, writing skills and strategies, written and oral English language conventions, and listening and speaking skills. At higher grade levels English-language arts teachers are also expected to know how to continue to develop reading skills as well as to be familiar with historically and culturally significant texts and be able to convey the themes and meaning of these texts to their classes.

There are clear and direct links between the standards established for student learning in California and the standards established for teaching credentials. Both subject matter competence exams and subject matter preparation programs for teachers must be aligned with the state content standards and curriculum frameworks (Cal. Educ. Code Section 44259(b)(5)). The courses and tests required of candidates are carefully mapped onto the CCTC's standards describing what teachers should know and be able to do, which are in turn directly related to the content standards expected of students. For example, the Reading Instruction Competence Assessment (RICA) was constructed "to ensure that these prospective teachers have learned the knowledge and skills they need to provide effective reading instruction in a balanced, comprehensive program for K–8 students."⁵ The competencies it measures (e.g., assessment of reading development, planning and managing reading instruction, phonemic awareness, phonics and other word identification strategies, reading comprehension, literary response and analysis) are skills the content standards outline for students to acquire. Accreditation standards for teacher education programs incorporate the student content standards as the basis for teacher competencies and course expectations.

Equally important are the state's expectations—reflected in its requirements for the teacher credential and for the accreditation of teacher education programs—for teaching content to diverse learners: knowledge of second language acquisition and development, knowledge of child development, and knowledge of the needs of exceptional learners and strategies for teaching to these special needs.

As noted earlier, however, a sizeable number of California's teachers lack a full credential for all or part of their teaching assignment (CCTC, 2002), and many have not completed, or even begun, a teacher education program. Although large numbers of teachers are allowed to practice without having met the standards the state has set for their preparation and competence, students in California will, as of 2006, not be allowed to graduate without having met the state standards. There are no exceptions to this policy for students. The latitude granted to teachers about whether they will meet the state's standards (and to schools about whether they will hire such teachers) is not granted to children, despite that these teachers' abilities will substantially determine students' chances of success, not only in school but in life.

REASONS FOR DISPARITIES IN ACCESS TO QUALIFIED TEACHERS IN CALIFORNIA

As a consequence of growing enrollments and class size reduction, California's teaching force grew from about 220,000 in 1991 to just over 300,000

in 2001. These trends plus high attrition lead analysts to estimate that California will need to hire about 25,000 teachers annually over the next decade (Shields et al., 1999, 2001). This steep growth and the widespread issuance of emergency credentials in the years since the class size reduction initiative have led to a common perception that there are inevitable teacher shortages in California. This perception, at first blush, appears well founded. According to the California Department of Education, in 2000–2001, there were more than 40,000 teachers teaching without full certification (about 14% of the state's teaching force).⁶ The comparable proportion of teachers holding substandard licenses in most other states is well under 5%, and in more than 20 states it is close to zero.⁷ While some teachers on emergency or temporary licenses are fully trained out-of-state entrants who have not yet satisfied one or another requirement unique to California, most lack essential aspects of preparation for their jobs.

The problems in staffing California schools are not the result of absolute shortages of qualified individuals in the state or the nation, however. There are actually more credentialed teachers available to teach in California schools than there are positions to be filled. Whereas there are about 300,000 K–12 teaching jobs in California, by one estimate there are about 1.3 million individuals who hold teaching credentials in the state.⁸ Some of these are individuals who prepared to teach and never entered teaching in the state; others are individuals who taught in California and left teaching. Of course, not all of these individuals would be prepared to re-enter the teaching force. Studies of teacher supply have found that 20 to 30% of teachers who have left the classroom eventually returned to teaching in the same state, with re-entry rates highly dependent on salaries (Beaudin, 1993; Massachusetts Institute for Social and Economic Research, 1987; Murnane et al., 1991). In 2000, new graduates, out of state entrants, and reserve pool entrants provided at least 30,000 fully qualified teachers available to enter California's teaching force for the 25,000 job openings that year.

If California does not lack a sufficient number of individuals prepared for teaching, why are there so many underqualified teachers in California schools? The shortage problem may better be characterized as a problem of teacher attraction, distribution, and retention. Analyses of California's teacher labor market suggest that the hiring of large numbers of underqualified teachers in schools serving disadvantaged students has been a function of several factors over the last decade or more:

1. *Noncompetitive teacher salaries that are also substantially unequal across districts.* As in other fields, the best-qualified teachers are typically recruited to better-funded districts with high levels of support. Teachers who have options want to work in schools that pay them adequately and support their efforts well—conditions that are lacking in the state's disadvantaged

schools. Beginning and average teacher salaries in California, adjusted for cost-of-living and teachers' shorter work year, lag behind those of liberal arts graduates by 15% and behind those for computer science graduates and engineers by more than 30%. These differentials are likely to contribute to high non-entry and attrition rates for teaching generally and for teaching fields like mathematics and science in particular. When adjusted for cost of living, California's average salary ranked 32nd among the states in 2002 (Nelson, Drown, & Gould, 2000). Teachers' salaries have slipped steadily both in real dollar terms and as a share of the education budget for more than two decades. As of 1999–2000, California spent 39.5% of its education expenditures on teachers' salaries, a decline of 13 percentage points since 1964–65, when more than 50% of the education budget supported teachers' salaries (Nelson, Drown, & Gould, 2001, p. 14). Finally, and most importantly for the inequities documented in this paper, beginning teachers' salaries in California vary substantially across districts within local labor markets, creating labor market imbalances within and across regions. In 2001, teacher salary levels (adjusted for the level of other county wages⁹) showed a nearly 3 to 1 ratio for the highest- and lowest-paying districts across the state. In an analysis of hiring practices and salaries in California counties, Pogodzinski (2000) demonstrated that teachers' real compensation varies considerably across schools districts within the same county, and that these wage differences are a significant factor in explaining the use of emergency permits and waivers.

2. *Poor working conditions in many schools, especially those serving the least advantaged students.* Teaching conditions steadily worsened after the passage of Proposition 13 in 1979, especially in the least wealthy districts, eventually leading to what has been called the "Mississippication of California schools" (Schrag, 1999). Large classes, severe overcrowding of facilities, and inadequate stocks of books and materials have converged to create stressful settings for teaching and learning in many schools, especially those that serve the most economically disadvantaged students. Schools serving high proportions of poor and minority students are markedly larger, have more crowded facilities, and are more likely to be running on year-round schedules (CTA, 2001). Districts with the neediest students generally pay the least and provide the fewest supports in terms of class sizes, materials, resources, and equipment.

Some studies have found that teacher attrition seems related to the demographic characteristics of schools' student populations: specifically, that teachers transfer out of high-minority schools into schools with fewer minority students (e.g., Carroll, Reichardt, & Guarino, 2000). A survey of more than 1,000 teachers in California found that a number of these demographic variables are related to school working conditions, and teachers are significantly more likely to say they plan to leave a school soon if the working conditions are poor (Harris, 2002). Furthermore, regression

analyses using these survey data indicate that turnover problems are more strongly influenced by poor working conditions and low salaries than by student characteristics (Loeb, Darling-Hammond, & Luczak, in press). Working conditions variables—including large class sizes, facilities and space problems, multitrack schools, and lack of textbooks—are the strongest predictors of serious turnover problems and large proportions of beginning teachers in a school (another proxy for high turnover), followed by a measure of beginning teacher salaries that has been adjusted for local labor market wages. From a policy perspective this is good news, since it points to remediable factors—that is, the availability of materials, class sizes, high-quality leadership, and professional learning opportunities—that can be altered to shape the availability of teachers to all students.

3. *Restrictions of the pool of qualified teachers through limitations on teacher education pathways.* In 1970, California became the only state in the nation to eliminate undergraduate teacher education. With the exception of California, most teacher education in the United States occurs within 4- to 5-year undergraduate programs, which provide about 80% of all teachers nationally. Although the move to require post-baccalaureate credentialing programs was motivated by concerns for raising quality, it also sharply limited the supply of teachers, making it difficult for many young people to get the information and guidance they needed to enter teaching when considering careers in high school, community college, and college. This policy also raised the costs of entering teaching and made it more difficult to prepare teachers in an integrated fashion that would connect subject matter and teaching methods. Out-of-state entrants were required to complete a 5th year of teacher education even though they were already fully prepared and credentialed in other states. This was one of several disincentives for entry from other states.

Recent regulatory changes that now allow blended programs of content and professional study beginning in the undergraduate years provide new options for recruiting people into teaching, but few of these programs exist, the process for initiating them is complicated, and few incentives have been enacted for colleges to create such programs. There have also been restrictions on the opportunities for community colleges to offer courses that begin to prepare students for entry into teacher education. Furthermore, despite rising demand from schools and from applicants who wanted to enter teacher preparation programs, the California State University system, hampered by budget limitations, has sometimes had to turn away qualified applicants (Shields et al., 1999).

Finally, in addition to requiring as many as three tests to enter a teacher education program, the state set cut-off scores on the two batteries of subject matter tests substantially above those elsewhere in the country. For example, in terms of cumulative pass rates, only 21% of all candidates passed the

mathematics test batteries, only 35% passed the social science batteries, and only 44% passed the English batteries through 1997–1998, the most recent year for which data have been reported (Brunsman & Carlson, 1999, revised). Ironically, candidates who do not pass these tests cannot enter or continue in teacher education, but they could teach in classrooms as teacher of record on emergency permits, waivers, or preintern credentials without the benefit of teacher education or mentoring supports.

4. *Restrictions of the pool of teachers through limits on reciprocity with other states.* In addition to these limitations on teacher supply, California until recently had no form of reciprocity in licensing with other states. Thus, despite nationwide surpluses of elementary teachers during the 1990s (AAEE, 1998), California hired tens of thousands of untrained elementary teachers. Candidates coming into the state who had completed out-of-state teacher education programs could apply for temporary permits while they completed a large number of test and course requirements, along with a 5th year of study (CCTC, 1998, p. 19).

A 1998 study commissioned for the CCTC (CCTC, 1998) noted the surpluses in other states and also the difficulties out-of-state prepared candidates experienced trying to navigate the requirements they had to complete. The report documented concerns about costs of courses and examinations, confusion about how to complete the many and varied requirements, and redundancy with other requirements the teachers had already met elsewhere. In a survey of fully prepared out-of-state teachers, credential requirements were the number one factor in the decision of teachers who had left teaching in California and one of the top factors in decisions about whether to continue teaching in California, just behind salaries and working conditions (pp. 27–28). A large number of teachers thought the requirements for the CBEST, subject matter verification, and 5th year of study were redundant or inappropriate (pp. 29–30), saying that they had already taken similar tests and courses in other states.

The legislature passed a bill in 1998 authorizing the CCTC to establish reciprocity with other states and, in the spring of 2000, the CCTC approved a list of states with which it would seek to ascertain “equivalences” for some aspects of the California requirements. However, relatively few states have fashioned their requirements sufficiently like California’s to be deemed comparable in all areas. As of May, 2002, only seven states had been judged to have fully comparable elementary programs, and seven had been judged to have fully equivalent mathematics programs. Even candidates from these states still have to complete the CBEST and the requirement for a 5th year of study after the bachelor’s degree, if they have not already completed such additional study.¹⁰ Although these efforts to acknowledge teachers’ prior training are a useful step, this policy has not yet succeeded in increasing recruitment.

5. *Inadequate recruitment incentives for high-need fields and locations.* The barriers described earlier are problematic in all fields but are especially so in high-need fields like mathematics, science, computer technology, special education, and bilingual education/English language development where there are genuine undersupplies of candidates. Between 1999 and 2002, there was an expansion of service scholarships and loans to underwrite the preparation of those who will enter teaching (reduced since then by recent budget cuts). Previously, there were relatively few supports for individuals who wanted to become well prepared before they enter teaching in California. For example, the \$23 million allocated to such programs in 2000–2001 was only half of the amount allocated to preintern and intern programs that allow districts to hire teachers before they are prepared. Meanwhile, the costs in professional development needs for underprepared teachers, extra services and summer school for students who were inadequately taught, and ongoing recruitment to replace emergency hires who leave reach into the hundreds of millions.

6. *Overreliance on pathways into teaching, such as emergency hiring and short-term alternative routes, that have extremely high attrition rates.* As a consequence of the previously stated conditions, the percent of teachers completing preparation before entering teaching dropped from 78% in 1991–1992 to 49% in 2000–2001 (Shields et al., 2001, p. 17). For many years, California responded to difficulties in hiring teachers in high-need schools primarily by reducing standards rather than by increasing incentives. And districts' financial problems have led some to hire inexpensive unprepared teachers even when more expensive, fully prepared teachers are available. This has led to a reliance on pathways into teaching that have extremely high turnover rates. The CCTC's estimate that about 40% of emergency credentialed teachers in California leave within a year is consonant with other state and national data showing high attrition rates for entrants who have little training before they enter teaching (Darling-Hammond, 2000a). A recent report of the National Center for Education Statistics (NCES) notes that 29% of new teachers who had not had student teaching left teaching within 5 years as compared to only 15% of those who had had student teaching (Henke, Chen, & Geis, 2000). High turnover may be a function of both lack of preparation, which leads to discouragement and burnout, and lack of commitment on the part of those who enter because the job is readily available rather than because they are really interested in teaching.

An approach to recruitment that emphasizes ease of entry without preparation rather than incentives to support recruits in becoming well prepared can be pennywise and pound foolish. It creates a revolving door of teachers into and out of teaching, imposing high replacement costs for teachers who leave early and high educational costs for the undereducation

of students who have not had the benefit of trained and experienced teachers.

7. *Inadequate supports for beginning and veteran teachers.* In addition to the attrition caused by the large number of emergency hires and others with minimal training, teacher turnover in California has also been related to the unavailability of support for novices, only 16% of whom were working with a mentor teacher on a regular basis in 1998 (Shields et al., 1999). Even with recent expansions of the Beginning Teacher Support and Assessment (BTSA) and Peer Assistance and Review (PAR) programs, the share of beginning teachers working regularly with a mentor is still small. In 2001, 39% of 1st and 2nd year teachers participated in BTSA and only half of these received classroom visits from their support provider at least monthly. The rates were much lower for other beginning teachers (Shields et al., 2001, p. 102). While the state has provided significant funding for beginning teacher support, the funds were not targeted for in-classroom mentoring, and many districts had little capacity to mount high-quality programs when the programs were scaled up.

Finally, the lack of resources for both teaching and teacher learning in many districts appears to contribute to higher than average rates of teacher attrition in California.¹¹ In addition to the poor working conditions noted earlier, teachers in some districts do not have the opportunity to engage in sustained, high quality professional development that will enable them to help their students meet the new learning standards in their subject area, and few have any regular time for shared planning and collaboration with other teachers to help them solve problems of practice (Shields et al., 1999). These kinds of opportunities matter greatly to teachers. Teachers who are planning to leave their school soon rank lack of time for planning and collaboration as the second most frequent reason, behind poor leadership. In schools with the greatest proportions of English language learners, lack of time for collaboration is ranked as the top-most reason for thinking of leaving. California teachers who rate their professional development opportunities as poor are also significantly more likely to say they plan to leave their school soon (Harris, 2002).

8. *Personnel practices that undermine the hiring and retention of qualified teachers, especially in many urban school systems.* Evidence nationally and in California indicates that the hiring of underqualified teachers in many communities is often exacerbated by cumbersome hiring procedures that can take months; late hiring caused by inadequate hiring projections, late budget decisions, and seniority transfer provisions; and, sometimes, preferences for hiring untrained, inexperienced teachers who cost less money (NCTAF, 1996; Shields, 2001, pp. 83–86). In California, nearly 50% of newly hired teachers in 1998 were hired after August 1, and 25% were hired after the start of the school year (Shields et al., 1999). Witnesses for

this case described how, as a cost saving measure, some districts won't allow schools to hire new teachers until a few weeks into the school year when enrollment has "stabilized." By that time, all credentialed teachers are hired by other schools, only emergency credentialed teachers are left, and long-term substitutes are necessary until any teacher can be located.

Teachers in schools with large numbers of underprepared teachers are significantly less likely to report that they were actively recruited or assisted in the hiring process and more likely to report that the hiring process was slow and full of obstacles (Shields et al., 2001, p. 84). Analyses of district hiring practices by the state Fiscal and Crisis Management Assistance Team (FCMAT) in districts that hire large numbers of underqualified teachers often report hiring and screening procedures that are erratic and fraught with glitches, application processes that are not automated or well-coordinated, applicants and vacancies that are not tracked, and recruitment that is disorganized. For example, in Los Angeles the FCMAT report noted, among many other problems, that candidates must wait for hours in long lines to get interviews and are frequently sent away without applications or interviews even after they have waited for a whole day; there is no priority given to fully prepared and credentialed candidates; candidate applications are not made available to school sites or key district offices; schools can save money by hiring substitutes rather than full-time prepared teachers, and many do so even when credentialed teachers are available. In addition, many districts will bypass well-qualified applicants with greater education and experience in order to hire untrained teachers who cost less. In hearings for the Assembly Select Committee on Low Performing Schools (2001), the committee learned the following:

There may be reverse incentives for school districts to hire emergency permit holders. . . . (I)n some situations districts hire emergency permit holders because emergency permit holders: 1) can be paid less; 2) need not initially be provided with benefits; 3) cannot be placed on a tenure track; 4) can be dismissed easily; 5) need not be provided with systematic support and assistance (except for pre-interns). (p. 5)

9. *Lack of accountability for ensuring the hiring of qualified teachers when they are available.* In contrast to other states that carefully monitor and enforce teacher certification laws when districts are hiring and assigning staff, California has had no procedures for ensuring that districts engage in efficient recruitment strategies, hire fully certified teachers when they are available, or maintain a well-functioning personnel system. The CCTC has not had authority or resources allocated to enforce the state's certification laws with respect to district hiring.

In Connecticut, for example, only 1% of teachers hold temporary credentials while they serve as a long-term substitute, enter from another state, or switch fields. (The comprehensive policy system that Connecticut enacted to create an adequate teacher supply is described in Wilson, Darling-Hammond, & Berry, 2001.) Connecticut has reciprocity with 41 other states; teachers receive an interim credential while they pass the Praxis test if they haven't already done so previously in another state. In all cases of temporary credentials, candidates must have a BA and at least 12 semester credits in the field they will teach. If a district wants to hire or assign a teacher in one of the temporary license categories, an application must be filed in writing for each individual applicant, demonstrating a shortage of qualified applicants. The application requires documentation of the number of interviews that were conducted and an explanation that no fully qualified candidate was available. If a properly certified candidate was rejected, the school district must provide a rationale for its hiring decision (e.g., bad references). The next year, the district must re-post the position and hire a fully qualified teacher or go through the same procedure again. Each year state agency staff file an annual compliance report.¹² In Minnesota, to hire a candidate on a temporary credential, districts must demonstrate that the vacancy has been advertised statewide, diligent efforts have been made to recruit and interview candidates, and no qualified teachers were available. Each application is reviewed individually, and sometimes Board of Teaching staff counsel the district in attempts to advertise more widely or to locate qualified staff. As in Connecticut, districts must repost each position every year. The agencies involved in approving temporary credentials conduct compliance reporting on these teachers, checking mismatches of credentials and assignments through the State Automated Reporting System (STAR), filing annual reports, and following up with districts found to be out of compliance. In such cases, school districts must work to remedy the situation. In egregious cases, school funding can be withheld.¹³

No accountability system like this exists in California. Districts obtain authorization to issue emergency permits in bulk—sometimes by the thousands.¹⁴ To be approved, a district must attest to efforts to recruit personnel, and the CCTC relies on the attestations of the district when evaluating the requests. The CCTC does not review the districts' processing of applications, nor does the agency take any action to check on the veracity of district claims when a district requests a waiver of teachers' credentials. Although 1999 legislation requires districts to hire the most qualified person for the position (in the following order: credentialed teacher, candidate nearing the completion of a preparation program, intern, emergency permit holder, waiver holder), there appears to be no enforcement mechanism in place for ensuring that this occurs and no system for determining when an investigation should be launched.

The State's Accountability System

Ironically, California's new testing and accountability system, which includes sanctions for schools that have low test scores and rewards for those with high or improving scores, may also contribute to the maldistribution of qualified teachers in schools serving disadvantaged students. A recent study by the Public Policy Institute of California (PPIC) raised this concern:

Although we believe that it is important to hold schools accountable, a likely side-effect of the new drive for accountability will be a shortage of qualified teachers and principals in schools serving disadvantaged populations. The reason is simple: Because of possible sanctions, personnel will avoid working in the schools most likely to be identified as failing to meet state standards. (Betts, Rueben, & Danenberg, 2000, p. xxvi)

This concern may be warranted. A similar outcome was recently reported as a result of Florida's recent use of test scores for school rewards and sanctions. Qualified teachers were reported to be leaving the schools rated D or F "in droves", to be replaced by teachers without experience and often without training (DeVise, 1999; Fischer, 1999). Other unintended side-effects of accountability schemes that reward or sanction schools based on average student scores include pushing low-scorers into special education where their scores do not count, holding them back in the grades so their scores appear artificially to be higher, and encouraging them to drop out so that schools' average scores will look better (Allington & McGill-Franzen, 1992; Figlio & Getzler, 2002; Haney, 2000; Shepard & Smith, 1986; Smith et al., 1986). It remains to be seen whether California's accountability system will produce similar results.

RECOMMENDATIONS

An adequate remedy should aim to ensure that all teachers will be prepared to teach to its new student learning standards and that all students will have access to fully qualified teachers who can provide them with the opportunity to learn. A comprehensive remedy should seek to:

1. Increase the supply of qualified teachers for high-need fields and locations,
2. Reduce high turnover and unwanted attrition of teachers, especially in heavily impacted schools that are currently hard-to-staff,

3. Ensure that all teachers have the preparation they need to teach to the state standards,
4. Monitor the provision of qualified teachers to all schools and students, and
5. Create incentives that enable and require all districts to hire well-qualified teachers.

Since the problem of teacher quality in California schools is a matter of both will and capacity, a combination of mandates and incentives will be required to address the problem. Additional resources must be coupled with policies that place more pressure on states and districts to hire and support qualified teachers. A successful remedy would likely include at least three components:

- Benchmarks: What baseline standard(s) should be met?
- Processes for procedural accountability/state monitoring: How should the state identify and respond to schools that are out of compliance?
- Policy strategies and incentives: What policy options can the state pursue to address the central problems of supply and distribution?

STANDARDS AND BENCHMARKS

Ultimately, the constitutional standard requires that every student have full and equal access to qualified teachers who can enable students to meet the standards required of them by the state. The standard of full and equal access to qualified teachers has also recently been enacted in federal Elementary and Secondary Education Act requirements requiring that all students served under the law be taught by “highly qualified teachers” who have obtained “full state certification as a teacher . . . and (do) not have certification or licensure requirements waived on an emergency, temporary, or provisional basis.”¹⁵

The state of California measures qualifications through a rational system of certification that is based on knowledge about teaching and learning and grounded in teaching standards as well as the state’s standards for student learning. This system of certification provides the legal minimum measure of qualifications. The state has created a system to require qualified teachers: All students should receive them. While there are a number of challenges to staffing California’s schools, the analysis included in this paper demonstrates that the problem is susceptible to policy solutions. To make progress, the state should establish a standard below which no school can fall and maintain a monitoring system that identifies schools falling below

the standard and that ensures those schools and their districts receive close scrutiny and oversight.

Over the short run, while a comprehensive remedy is being implemented, the following benchmarks should be established, effective immediately:

- No school (or track in schools with year-round, multi-track schedules) should be allowed to have more than 20% of its teachers lacking full preliminary or clear certification. This is far from a constitutional standard—which would require all students in public schools to have full access to teachers who meet the state’s standards for professional teaching credentials—but is a minimal standard for a school that can function at even a rudimentary level of professional responsibility for planning and oversight of practice.
- Low-performing schools should be prohibited from having more than the state average proportion of teachers without clear credentials. As in New York State, which recently prohibited the assignment of any uncredentialed teachers to its lowest performing schools, this measure should stimulate more aggressive recruitment, stronger supports, and new teaching incentives to change the mix of teacher qualifications in schools that have allocated the least prepared teachers to the students with the greatest needs.
- Require evidence of annual progress: To guide progress and target assistance, the state should develop an annual Teacher Qualifications Index (Futernick, 2001) that provides school and district information about the numbers of teacher experience and certification status and is published alongside the Academic Performance Index (API).

State Monitoring and Accountability

Benchmarks will be of little value if there is no support or enforcement of changes in practice. The legislature should set a goal of phasing out the approval of waivers and emergency permits over the next 5 years and should develop an effective system for monitoring and enforcing its teacher credentialing laws, evaluating problems, and improving school hiring.

- Expand investigatory power and capacity of appropriate state agencies to enforce the state’s credentialing standards and prevent the hiring of uncredentialed teachers where qualified, credentialed teachers are available.
- As other states do, require all districts applying for emergency permits and waivers to demonstrate that an adequate search has been conducted; that there are no suitable, qualified individuals who have applied

for the position; and that there are no certified individuals in this field currently holding non-teaching positions in the district who could be reassigned in lieu of hiring an uncredentialed teacher.

- Monitor the annual Teacher Qualifications Index. For schools and districts with large numbers of underqualified teachers, the state should impose closer scrutiny, including independent verification of facts regarding reasons for the unavailability of credentialed teachers, before approving any emergency permits, waivers, or pre-internships.
- Conduct a state audit of school hiring needs and district hiring policies in schools or districts that repeatedly hire large numbers of underqualified teachers. Require and help to fund overhaul of non-functioning recruitment and hiring systems.
- Provide incentives to districts for updating and streamlining hiring processes, for timely hiring of fully qualified teachers, and for priority placement of fully qualified teachers and administrators in hard-to-staff schools. The CA Professional Development Task Force Report (2001) suggested that, "A state challenge fund should be created to support high-need districts in upgrading their personnel departments (including technology infusions), expanding their recruitment capacity, and streamlining their hiring processes."

Policy Strategies for a Comprehensive Remedy

The problem of emergency hiring cannot be cured only by better enforcement. Ensuring that all students are taught by well-prepared teachers will require a set of purposeful strategies for managing the teacher labor force in California and efforts to make teaching in hard-to-staff schools more attractive by offering better salaries, working conditions, and mentoring. Other states that have ended the practice of emergency credentialing have pursued a multi-pronged approach: raising and equalizing salaries across districts; creating salary aid that rewards candidates for becoming well-prepared and districts for hiring well-prepared candidates; increasing subsidies to candidates and colleges for training in shortage fields; expanding reciprocity; improving retention through better preparation, mentoring, and working conditions; and enforcing certification laws while assisting districts in recruiting more effectively. California has begun to enact some of these strategies, though not yet at a scale and in a combination sufficient to solve the problem. To ensure an adequate supply of teachers to all districts, the state should create a finance system that ensures more market sensitive and equalized salaries across districts and that incorporates incentives for hiring fully qualified teachers.

Resolving disparities in access to qualified teachers in California will require attention to greater equity in funding and salaries that takes into account the different labor markets, costs of living, and levels of pupil need across the state. The Public Policy Institute observed the following:

Equalization policies should do more than alter growth in overall budget levels. We believe they should target the area of greatest inequality: teacher preparation. . . . Traditional redistributive policies aimed at reducing variations in revenues per pupil across districts are unlikely to equalize student achievement across all schools. . . . (R)esource inequality is restricted primarily to teacher training and curriculum, so that redistribution must focus on these specific characteristics of schools rather than on revenues per pupil alone.” (Betts, Rueben, & Danenberg, 2000, pp. xxix–xxx)

This suggests a strategy like Connecticut’s that targets resources to the provision of well-qualified teachers and that takes into account the factors that affect their distribution, including the purchasing power of salaries (see, e.g., Wilson, Darling-Hammond, & Berry, 2001). The PPIC report notes that teacher shortages in the most heavily affected areas might be partially reduced through differential cost-of-living adjustments across school districts (p. xxiv), a reform also discussed in a recent report by the Legislative Analyst’s Office (LAO, 1999). The other source of differential costs to be taken into account is the cost of education for students with special education needs, Limited English proficiency, and those who live in poverty who are more heavily concentrated in low-income school districts.

A Connecticut-type strategy would establish a target minimum beginning teacher salary, adjusted for cost of living differences, that is competitive in the labor market and provide salary subsidies to districts to reach this target minimum salary. The subsidies would be provided based on an equalizing formula that provides different levels of funding to districts depending on their wealth, cost of education, and pupil needs. This could be done either through a weighted formula approach that includes cost of living and pupil needs in the formula, or through a categorical aid system for districts with high priority needs. Tying these subsidies to salaries for fully certified teachers, as Connecticut did, would create incentives for candidates to become prepared and for districts to hire prepared candidates. A strategy like this one would put more of California’s resources into teachers salaries, create incentives and capacity for hiring qualified teachers, and create a level playing field among districts in gaining access to qualified teachers.

The state should expand subsidies for the preparation of prospective teachers, especially for shortage fields and locations. If an adequate ongoing

supply of teachers is to be available for California schools, it is critical that well-prepared teachers be recruited into shortage fields (e.g. mathematics, science, computer science, special education, foreign languages, English Language Development) and into shortage locations, especially urban and poor rural schools. Successful reforms of teaching that led to student achievement gains in states like Connecticut and North Carolina have been supported by scholarships and forgivable loans subsidizing teacher education for candidates who prepare and teach in shortage fields or shortage locations. The subsidies for preparation, offered in exchange for several years of public school teaching in the state, have brought strong candidates into teaching and kept them there. The highly selective North Carolina Teaching Fellows Program, for example, recruited and retained thousands of high-ability candidates into teaching in North Carolina by fully funding their teacher preparation (NCTAF, 1996).

California should expand its current incentives for recruiting undergraduate and graduate students into teaching. Incentives such as increased subsidies or reduced payback periods for those preparing to teach in shortage fields (e.g., math, science) or who will work in high-need locations (including low-income, high-need, or hard-to-staff schools) can direct candidates to the fields and locations where they are needed.

To ensure that candidates receive the kind of high-quality preparation that will allow them to become competent and to stay in teaching, these subsidies should underwrite programs that provide a coherent preparation including student teaching and provide stipends for student teaching in low-income, high-need schools to allow candidates to learn to teach in these schools. Finally, a high yield source of candidates for hard-to-staff schools is the paraprofessional work force. To meet the need for teachers, recruitment incentives should also support expanded pathways into teaching for paraprofessionals and other students via community college to college teacher preparation program articulation and student supports.

The state should enhance reciprocity with other states and streamline credentialing procedures. Since there is a substantial surplus of teachers in many other states, reciprocity coupled with aggressive recruitment could make an important contribution to California's need for well-qualified teachers. Whereas California enrollments are projected to increase by more than 20% by 2007, enrollment declines are anticipated in most parts of the Northeast and Midwest, and other states will have stable enrollments (NCES, 1998). Many of these states have a large number of teacher education institutions and regularly produce more teachers than they can hire. Elementary education has been a field of national surplus for a number of years, along with fields like English, social studies, art, business education, health education, physical education, and social studies (AAEE, 1998). The state should continue to work to establish even more complete reciprocity

with other states, while also reducing duplicative testing requirements for both in- and out-of-state candidates.

The state should expand incentives for local school districts to improve working conditions in schools that serve high-need students and in hard-to-staff schools. In the long run, more equalized funding in California that takes account of differences in the costs of education would allow schools to improve other aspects of their operations that influence the recruitment and retention of well-qualified teachers, such as facilities, availability of materials and supplies, and class size. In the immediate run, more substantial categorical aid to improve working conditions and teaching conditions in hard-to-staff schools is necessary to stem the flood of attrition in these schools. Smaller classes, greater access to materials, time for co-planning and professional development, and high-quality mentoring would greatly impact the ability of disadvantaged schools to get, keep, and support new teachers.

The state should also expand supports for high-quality teacher preparation and mentoring. Recent regulatory changes create new opportunities for California colleges and universities to combine undergraduate and graduate studies, to connect content and pedagogy, and to create more extended clinical practice experiences. These changes could enable campuses to create the more powerful integrated models like the 5-year programs that have proven successful elsewhere in the country (Andrew & Schwab, 1995). The state needs more sustained and purposeful incentives for the continuation and expansion of high-quality models of preparation, including funding that ensures that colleges in high-demand areas can accept qualified applicants and guidance that ensures that both preparation and induction models use strategies that have been shown to be effective in developing effective teachers who stay in the profession. To build a strong system California should do the following:

- Provide incentives for the establishment of more extended teacher education programs, including programs that start in the undergraduate years, sufficient to ensure the teacher education pipeline is aligned with the need for credentialed teachers.
- Support professional development school partnerships between schools and universities in high-need communities that allow new teachers to learn under the guidance of expert veterans in schools with concentrations of low-income and minority students.
- Ensure that formulas for the support of teacher education provide incentives for the expansion of high-quality programs and adequately support the growing number of students served, especially in high-demand, high-need regions of the state.

- Develop and fund high-quality mentor training and provide incentives to attract, hire, and reward mentors in high-need schools.

The Need for a Comprehensive Approach

Research and experience in California and elsewhere predict the likely success of these strategies, particularly if they are enacted in a coherent, comprehensive system aimed at ensuring that every child has access to qualified teachers. In addition to states that have created policy systems that provide well-qualified teachers to their students, some urban districts in California and elsewhere have demonstrated that using a focused and comprehensive approach can ensure well-qualified teachers for all students and strong achievement across a range of diverse students (see, e.g., Snyder, 1999, re: New Haven, California; Darling-Hammond et al., 2002, re: San Diego, California). While the policy challenge in California is not trivial, especially after years of neglect, it is also clearly not insurmountable. With determination and will, California can and must make good on its constitutional obligation to provide each child the right to be taught that is a foundation for the right to learn. Anything less is a violation of the constitutional requirement that all students receive a basic education with equal protection under the law.

Notes

1 Here and elsewhere, “underqualified” means teachers who lack a preliminary or clear credential in their teaching field, the standard credential recognized by the state of California as reflecting full attainment of its standards for beginning and veteran teachers.

2 CCTC reports 1-year attrition rates for emergency credentialed teachers of 35% for elementary recruits and 48% for secondary recruits (CCTC Emergency Permit Persistence Data, 1996–97, compiled by Certification and Waiver Division, 1/9/98 on first time Multiple and Single Subject Long Term Emergency Permits). Linda Bond, director of governmental relations for the CCTC indicates that “two-thirds of emergency permit teachers do not receive full teaching certification” (personal correspondence, November 29, 1999).

3 Cal. Educ. Code Section 48070.5 provides that promotion and retention for students in the second through ninth grades shall be determined on the basis of either the results of the state’s STAR tests and minimum proficiency levels recommended by the State Board or the pupil’s grades and other indicators of academic achievement designated by the district.

4 This requirement was originally set for 2004 and was recently postponed when data revealed that most students in the state would not pass the multiple components of the examination.

5 CCTC *RICA: Why, What, When and Who? California Commission on Teacher Credentialing, California Reforms in Reading Instruction (K–8)*. Sacramento, CA: Author.

6 In 2000–2001, the CCTC reports that it issued 32,573 emergency permits, 2,265 waivers, 8,092 preintern credentials, and 3,953 intern credentials, for a total of 46,683 substandard credentials (CCTC, 2002).

7 According to the Schools and Staffing Surveys conducted by the National Center for Education Statistics, states that had fewer than 2% of their teachers working without a standard teaching certificate in their main assignment field in 1999–2000 included Alabama, Arkansas, Hawaii, Idaho, Illinois, Indiana, Minnesota, Montana, New Hampshire, New Jersey, North Dakota, Oklahoma, South Carolina, South Dakota, Tennessee, Utah, Vermont, Washington, West Virginia, Wisconsin, and Wyoming (tabulations conducted by John Luczak using SASS Teacher Survey data; a standard certificate is defined as either a regular certificate or a probationary certificate granted to beginning teachers who have full preparation while they complete a probationary period).

8 Personal communication, Michael McKibbin, CCTC consultant.

9 This method of adjustment helps to account for differences in cost-of-living and job market opportunities.

10 This can now be satisfied through a BTSA program as well as a university-based 5th year of study.

11 Survival rate data through 1995 indicated that about 40% of California's beginning teachers leave within five years (Fetler, 1997), as compared to a national rate of about 30% (Henke et al., 2000).

12 Interview conducted with Abigail Hughes, Associate Commissioner, Director of Evaluation and Research, Connecticut State Department of Education. Spring, 2001. Information about the credentialing system was also obtained from <http://www.state.ct.us/sde/dtl/cert/index.htm>.

13 Interview conducted with Mike Tillmann, Executive Director of the Minnesota Board of Teaching, Spring 2001. Information about the credentialing system was also obtained from http://cfl.state.mn.us/teachbrd/rd2873_toc.html.

14 For example, in one application, Los Angeles Unified School District requested more than 4,500 emergency permits for multiple subject candidates and more than 1500 for single subject candidates in 1998–1999, along with more than 10,000 CLAD and B-CLAD emergency permits. LAUSD Declaration of need for fully qualified teachers, 1998–99. (Submitted 4/30/98 to the CCTC.) The CCTC form notes that “this declaration must be revised by the employing agency when the number of emergency permits applied for exceeds the estimate by ten percent.”

15 U.S. Department of Education. “Improving Teacher Quality State Grants Non-Regulatory Draft Guidance,” C-1, June 6, 2002.

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